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     FILE 'MEDLINE, CAPLUS, BIOSIS, SCISEARCH' ENTERED AT 14:32:37 ON 15 NOV
     2002
L1           408 S PGK(W)(PROMOTER OR PROMOTOR OR REGULATORY(W)ELEMENT)
L2        208573 S TRANSGEN?
L3            77 S L1 AND L2
L4          3407 S FETAL(W)TISSUE(W)TRANSPLANTATION
L5         87133 S PARKINSON(2A)DISEASE
L6           661 S L4 AND L5
L7            57 S REVIEW AND L6
L8            52 DUP REM L7 (5 DUPLICATES REMOVED)

=> d au ti so 1-30 l8

L8   ANSWER 1 OF 52  CAPLUS  COPYRIGHT 2002 ACS
AU   Nakao, Naoyuki; Itakura, Toru
TI   Cell transplantation therapy for neurodegenerative disorders: from fetal
     tissue to neural stem cells
SO   Shinkei Kenkyu no Shinpo (2002), 46(2), 297-305
     CODEN: SKNSAF; ISSN: 0001-8724

L8   ANSWER 2 OF 52     MEDLINE
AU   Fricker-Gates R A; Lundberg C; Dunnett S B
TI   Neural transplantation: restoring complex circuitry in the striatum.
SO   Restor Neurol Neurosci, (2001) 19 (1-2) 119-38.  Ref: 232
     Journal code: 9005499. ISSN: 0922-6028.

L8   ANSWER 3 OF 52     MEDLINE
AU   Zesiewicz T A; Hauser R A
TI   Neurosurgery for Parkinson's disease.
SO   SEMINARS IN NEUROLOGY, (2001) 21 (1) 91-101.  Ref: 124
     Journal code: 8111343. ISSN: 0271-8235.

L8   ANSWER 4 OF 52     MEDLINE
AU   Borlongan C V
TI   Transplantation therapy for Parkinson's disease.
SO   EXPERT OPINION ON INVESTIGATIONAL DRUGS, (2000 Oct) 9 (10) 2319-30.  Ref:
     67
     Journal code: 9434197. ISSN: 1354-3784.

L8   ANSWER 5 OF 52     MEDLINE
AU   Lopez-Lozano J J; Mata M; Bravo G
TI   [Neural transplants en Parkinson disease: clinical
     results of 10 years of experience. Group of Neural Transplants of the
     CPH].
     Transplantes neurales en la enfermedad de Parkinson: resultados clinicos
     tras 10 anos de experiencia. Grupo de Trasplantes Neurales de la CPH.
SO   REVISTA DE NEUROLOGIA, (2000 Jun 1-15) 30 (11) 1077-83.
     Journal code: 7706841. ISSN: 0210-0010.

L8   ANSWER 6 OF 52     MEDLINE
AU   Barker R A
TI   Prospects for the treatment of Parkinson's disease
     using neural grafts.
SO   Expert Opin Pharmacother, (2000 Jul) 1 (5) 889-902.  Ref: 58
     Journal code: 100897346. ISSN: 1465-6566.

L8   ANSWER 7 OF 52     MEDLINE
AU   Mendez I; Baker K A; Hong M
TI   Simultaneous intrastriatal and intranigral grafting (double grafts) in the
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rat model of **Parkinson**'s **disease**.
SO BRAIN RESEARCH. BRAIN RESEARCH REVIEWS, (2000 Apr) 32 (1) 328-39.
Journal code: 8908638. ISSN: 0165-0173.

L8 ANSWER 8 OF 52 MEDLINE
AU Larsson L C; Widner H
TI Neural tissue xenografting.
SO SCANDINAVIAN JOURNAL OF IMMUNOLOGY, (2000 Sep) 52 (3) 249-56. Ref: 64
Journal code: 0323767. ISSN: 0300-9475.

L8 ANSWER 9 OF 52 MEDLINE
AU Barker R A; Kendall A L; Widner H
TI Neural tissue xenotransplantation: what is needed prior to clinical trials in **Parkinson**'s **disease**? Neural Tissue Xenografting Project.
SO CELL TRANSPLANTATION, (2000 Mar-Apr) 9 (2) 235-46. Ref: 74
Journal code: 9208854. ISSN: 0963-6897.

L8 ANSWER 10 OF 52 MEDLINE
AU Brundin P; Karlsson J; Emgard M; Schierle G S; Hansson O; Petersen A; Castilho R F
TI Improving the survival of grafted dopaminergic neurons: a **review** over current approaches.
SO CELL TRANSPLANTATION, (2000 Mar-Apr) 9 (2) 179-95. Ref: 151
Journal code: 9208854. ISSN: 0963-6897.

L8 ANSWER 11 OF 52 MEDLINE
AU Bjorklund A
TI Cell replacement strategies for neurodegenerative disorders.
SO NOVARTIS FOUNDATION SYMPOSIUM, (2000) 231 7-15; discussion 16-20. Ref: 39
Journal code: 9807767.

L8 ANSWER 12 OF 52 MEDLINE
AU Bjorklund A; Lindvall O
TI [Transplanted nerve cells survive and are functional for many years]. Transplanterade nervceller lever och fungerar i manga ar.
SO LAKARTIDNINGEN, (1999 Aug 11) 96 (32-33) 3407-12. Ref: 20
Journal code: 0027707. ISSN: 0023-7205.

L8 ANSWER 13 OF 52 MEDLINE DUPLICATE 1
AU Clarkson E D; Freed C R
TI Development of fetal neural transplantation as a treatment for **Parkinson**'s **disease**.
SO LIFE SCIENCES, (1999 Oct 29) 65 (23) 2427-37. Ref: 62
Journal code: 0375521. ISSN: 0024-3205.

L8 ANSWER 14 OF 52 MEDLINE
AU Wyman T; Rohrer D; Kirigiti P; Nichols H; Pilcher K; Nilaver G; Machida C
TI Promoter-activated expression of nerve growth factor for treatment of neurodegenerative diseases.
SO GENE THERAPY, (1999 Oct) 6 (10) 1648-60. Ref: 111
Journal code: 9421525. ISSN: 0969-7128.

L8 ANSWER 15 OF 52 MEDLINE
AU Macklin R
TI The ethical problems with sham surgery in clinical research.
SO NEW ENGLAND JOURNAL OF MEDICINE, (1999 Sep 23) 341 (13) 992-6.
Journal code: 0255562. ISSN: 0028-4793.
Report No.: KIE-63223.

L8 ANSWER 16 OF 52 MEDLINE
AU Freeman T B; Vawter D E; Leaverton P E; Godbold J H; Hauser R A; Goetz C G; Olanow C W
TI Use of placebo surgery in controlled trials of a cellular-based therapy

for **Parkinson's disease**.
SO NEW ENGLAND JOURNAL OF MEDICINE, (1999 Sep 23) 341 (13) 988-92.
Journal code: 0255562. ISSN: 0028-4793.
Report No.: KIE-63222.

L8 ANSWER 17 OF 52 MEDLINE
AU Yadid G; Fitoussi N; Kinor N; Geffen R; Gispan I
TI Astrocyte line SVG-TH grafted in a rat model of **Parkinson's disease**.
SO PROGRESS IN NEUROBIOLOGY, (1999 Dec) 59 (6) 635-61. Ref: 276
Journal code: 0370121. ISSN: 0301-0082.

L8 ANSWER 18 OF 52 MEDLINE
AU Dunnett S B
TI Repair of the damaged brain. The Alfred Meyer Memorial Lecture 1998.
SO NEUROPATHOLOGY AND APPLIED NEUROBIOLOGY, (1999 Oct) 25 (5) 351-62. Ref: 69
Journal code: 7609829. ISSN: 0305-1846.

L8 ANSWER 19 OF 52 MEDLINE
AU Obeso J A; Linazasoro G; Gorospe A; Rodriguez M C; Guridi J; Ramos E
TI [Pathophysiological bases, clinical results and indications for surgical treatment in **Parkinson disease**].
Bases fisiopatologicas, resultados clinicos e indicaciones del tratamiento quirurgico de la enfermedad de Parkinson.
SO NEUROLOGIA, (1999 May) 14 Suppl 1 54-71. Ref: 106
Journal code: 9005460. ISSN: 0213-4853.

L8 ANSWER 20 OF 52 MEDLINE
AU Serrano-Sanchez T; Diaz-Armesto I
TI [Brain-derived growth factor: current aspects].
Factor de crecimiento derivado del cerebro: aspectos de actualidad.
SO REVISTA DE NEUROLOGIA, (1998 Jun) 26 (154) 1027-32. Ref: 79
Journal code: 7706841. ISSN: 0210-0010.

L8 ANSWER 21 OF 52 MEDLINE
AU Starr P A; Vitek J L; Bakay R A
TI Ablative surgery and deep brain stimulation for **Parkinson's disease**.
SO NEUROSURGERY, (1998 Nov) 43 (5) 989-1013; discussion 1013-5. Ref: 199
Journal code: 7802914. ISSN: 0148-396X.

L8 ANSWER 22 OF 52 CAPLUS COPYRIGHT 2002 ACS
AU Sanberg, Paul R.; Willing, Alison E.
TI Cellular therapeutic approaches for neurodegenerative disorders
SO Nucleic Acids Symposium Series (1998), 38(Advances in Gene Technology: Molecular Biology in the Conquest of Disease), 139-142
CODEN: NACSD8; ISSN: 0261-3166

L8 ANSWER 23 OF 52 MEDLINE
AU Pogarell O; Oertel W H
TI Neural transplantation in **Parkinson's disease** and its effects on rest tremor: a **review** of the literature.
SO MOVEMENT DISORDERS, (1998) 13 Suppl 3 101-2. Ref: 14
Journal code: 8610688. ISSN: 0885-3185.

L8 ANSWER 24 OF 52 MEDLINE
AU Prasad K N; Clarkson E D; La Rosa F G; Edwards-Prasad J; Freed C R
TI Efficacy of grafted immortalized dopamine neurons in an animal model of parkinsonism: a **review**.
SO MOLECULAR GENETICS AND METABOLISM, (1998 Sep) 65 (1) 1-9. Ref: 66
Journal code: 9805456. ISSN: 1096-7192.

L8 ANSWER 25 OF 52 MEDLINE

AU Kanelos S K; McDeavitt J T
TI Neural transplantation: potential role in traumatic brain injury.
SO JOURNAL OF HEAD TRAUMA REHABILITATION, (1998 Dec) 13 (6) 1-9. Ref: 36
Journal code: 8702552. ISSN: 0885-9701.

L8 ANSWER 26 OF 52 MEDLINE DUPLICATE 2
AU Borlongan C V; Koutouzis T K; Jorden J R; Martinez R; Rodriguez A I; Poulos S G; Freeman T B; McKeown P; Cahill D W; Nishino H; Sanberg P R
TI Neural transplantation as an experimental treatment modality for cerebral ischemia.
SO NEUROSCIENCE AND BIOBEHAVIORAL REVIEWS, (1997 Jan) 21 (1) 79-90. Ref: 96
Journal code: 7806090. ISSN: 0149-7634.

L8 ANSWER 27 OF 52 MEDLINE
AU Brooks D J
TI PET and SPECT studies in **Parkinson's disease**.
SO BAILLIERES CLINICAL NEUROLOGY, (1997 Apr) 6 (1) 69-87. Ref: 99
Journal code: 9214291. ISSN: 0961-0421.

L8 ANSWER 28 OF 52 MEDLINE
AU Rehncrona S
TI A critical **review** of the current status and possible developments in brain transplantation.
SO ADVANCES AND TECHNICAL STANDARDS IN NEUROSURGERY, (1997) 23 3-46. Ref: 133
Journal code: 7501064. ISSN: 0095-4829.

L8 ANSWER 29 OF 52 MEDLINE
AU Shetty A K; Turner D A
TI Development of fetal hippocampal grafts in intact and lesioned hippocampus.
SO PROGRESS IN NEUROBIOLOGY, (1996 Dec) 50 (5-6) 597-653. Ref: 355
Journal code: 0370121. ISSN: 0301-0082.

L8 ANSWER 30 OF 52 MEDLINE
AU Chisholm A H
TI **Fetal tissue transplantation** for the treatment of **Parkinson's disease**: a **review** of the literature.
SO JOURNAL OF NEUROSCIENCE NURSING, (1996 Oct) 28 (5) 329-38. Ref: 34
Journal code: 8603596. ISSN: 0888-0395.

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FILE 'MEDLINE, CAPLUS, BIOSIS, SCISEARCH' ENTERED AT 17:29:37 ON 15 NOV 2002

L1 7176 S TRANSGEN?(8A)(KNOCKOUT OR DELET? OR DIMINISH?)
L2 3209 S NUCLEAR(W)TRANSFER
L3 12 S L1 AND L2
L4 7 DUP REM L3 (5 DUPLICATES REMOVED)

=> d au ti so ab 1-7 l4

L4 ANSWER 1 OF 7 MEDLINE DUPLICATE 1
AU Arat Sezen; Gibbons John; Rzucidlo S Jacek; Respess Donald S; Tumlin Monica; Stice Steven L
TI In vitro development of bovine **nuclear transfer** embryos from transgenic clonal lines of adult and fetal fibroblast cells of the same genotype.
SO BIOLOGY OF REPRODUCTION, (2002 Jun) 66 (6) 1768-74.
Journal code: 0207224. ISSN: 0006-3363.
AB This study examined bovine cloning strategies that may be used for gene targeting in animals of known phenotypic traits. Fibroblast cells derived from an adult and a fetus of the same genotype were transfected with a plasmid (pEGFP-N1) containing the enhanced green fluorescence protein and neomycin-resistant genes. After transfecting 2 x 10(5) cells, 49 adult and 35 fetal cell colonies were obtained. Green fluorescence expression was observed in 35 out of 49 (71.4%) adult clones and in 30 out of 35 (85.7%) fetal clones. Developmental rates to the blastocyst stage following **nuclear transfer** (NT) did not differ among nontransfected cell lines (adult, 20.0%; NT fetal, 18.3%), whereas developmental rates were significantly lower for adult and fetal cell lines expressing enhanced green fluorescent protein (EGFP; 11.3% and 6.4%, respectively, $P < 0.05$). However, there was no decrease in NT developmental rates (19.8%) when donor nuclei from EGFP-transfected cell lines not expressing EGFP but retaining neomycin-resistant gene expression were used as donor nuclei. NT embryos from adult and fetal cell lines had similar morphology, cell number, and ploidy. The results indicated that adult and NT fetal cells (identical genotype) can complete clonal propagation, including transfection and selection, and can be used to produce **transgenic** NT embryos; however, a possible **deleterious** effect of EGFP on embryo development should be considered in future gene targeting studies.

L4 ANSWER 2 OF 7 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AU Lai, Liangxue; Kolber-Simonds, Donna; Park, Kwang-Wook; Cheong, Hee-Tae; Greenstein, Julia L.; Im, Gi-Sun; Samuel, Melissa; Bonk, Aaron; Rieke, August; Day, Billy N.; Murphy, Clifton N.; Carter, David B.; Hawley, Robert J.; Prather, Randall S. (1)
TI Production of alpha-1,3-galactosyltransferase knockout pigs by **nuclear transfer** cloning.
SO Science (Washington D C), (8 February, 2002) Vol. 295, No. 5557, pp. 1089-1092. http://www.sciencemag.org/content/current/. print.
ISSN: 0036-8075.
AB The presence of galactose alpha-1,3-galactose residues on the surface of pig cells is a major obstacle to successful xenotransplantation. Here, we report the production of four live pigs in which one allele of the alpha-1,3-galactosyltransferase locus has been knocked out. These pigs were produced by **nuclear transfer** technology; clonal fetal fibroblast cell lines were used as nuclear donors for embryos reconstructed with enucleated pig oocytes.

L4 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2002 ACS
AU Harrison, Sharon J.; Guidolin, Angelo; Faast, Renate; Crocker, Lesley A.;

Giannakis, Chris; D'Apice, Anthony J. F.; Nottle, Mark B.; Lyons, Ian

TI Efficient generation of .alpha.(1,3) galactosyltransferase knockout porcine fetal fibroblasts for **nuclear transfer**

SO Transgenic Research (2002), 11(2), 143-150
CODEN: TRSEES; ISSN: 0962-8819

AB Pigs are currently considered the most likely source of organs for human xenotransplantation because of anatomical and physiol. similarities to humans, and the relative ease with which they can be bred in large nos. A severe form of rejection known as hyperacute rejection has been the major barrier to the use of xenografts. Generating transgenic pigs for organ transplantation is likely to involve precise genetic manipulation to ablate the .alpha.(1,3) galactosyltransferase (galT) gene. In contrast to the mouse, homologous recombination in livestock species to ablate genes is hampered by the inability to isolate functional embryonic stem cells. However, **nuclear transfer** using genetically targeted cultured somatic cells provides an alternative means to producing pigs deficient for galT. In this study the authors successfully produced galT+/- somatic porcine fetal fibroblasts using two approaches; pos. neg. selection (PNS) using an isogenic targeting construct, and with a promoterless vector using non-isogenic DNA.

L4 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2002 ACS

IN Melton, David William

TI Methods for amplifying genetic material in transgenic non-human animal cells by using purine phosphoribosyltransferase gene as selectable marker

SO PCT Int. Appl., 65 pp.
CODEN: PIXXD2

AB The present invention concerns a method comprising subjecting a cell from a host cell population to a gene amplification protocol to produce a transgenic non-human animal cell which is totipotent or totipotent for **nuclear transfer** and which cell comprises amplified copies of a nucleic acid sequence of interest. The selectable marker gene in plasmid vectors was selected from purine phosphoribosyltransferase gene, such as hypoxanthine phosphoribosyltransferase (HPRT). Several plasmid vectors contg. HPRT gene were constructed and tested for coamplification of gene of interest or amplification of partially-disabled HPRT minigene. Consequently, high levels of a product of interest may be obtained from the animal.

L4 ANSWER 5 OF 7 SCISEARCH COPYRIGHT 2002 ISI (R)

AU Niemann H (Reprint); Verhoeyen E; Wonigeit K; Lorenz R; Hecker J; Schwinzer R; Hauser K; Kues W A; Halter R; Lemme E; Herrmann D; Winkler M; Wirth D; Paul D

TI Cytomegalovirus early promoter induced expression of hCD59 in porcine organs provides protection against hyperacute rejection

SO TRANSPLANTATION, (27 DEC 2001) Vol. 72, No. 12, pp. 1898-1906.
Publisher: LIPPINCOTT WILLIAMS & WILKINS, 530 WALNUT ST, PHILADELPHIA, PA 19106-3621 USA.
ISSN: 0041-1337.

AB The critical shortage of human donor organs has generated growing interest for porcine to human xenotransplantation. The major immunological barrier to xenotransplantation is the hyperacute rejection (HAR) response that is mediated by preformed xenoreactive antibodies and complement. A promising strategy to control the complement activation, is the expression of human complement regulatory proteins in transgenic animals. We have used the human early cytomegalovirus (CMV) promoter to drive expression of the human complement regulatory protein CD59 (hCD59) in transgenic pigs. A total of eight live transgenic founder animals was born from which five transgenic lines could be established. mRNA analysis and Western blotting revealed high expression of hCD59 in heart, kidney, skeletal muscle, and skin in animals of lines 1 and 5, as well as in the pancreas of four lines. This pattern of expression was confirmed by immunhistological staining. A cell-specific expression in heart and kidney tissue of transgenic lines 1 and 5 was determined. Primary fibroblasts and

endothelial cell cultures derived from the aorta of **transgenic** pigs showed a significantly **diminished** sensitivity against the challenge with xenoreactive human antibodies and complement whereas non-transgenic control cells were highly susceptible to complement mediated lysis. Ex vivo perfusion of kidneys with pooled human blood revealed a significant protective effect of hCD59 against HAR. The average survival of transgenic kidneys was significantly extended (P<0.05) over nontransgenic controls (207.5 +/- 54.6 vs. 57.5 +/- 64.5 min). These data support the concept that hCD59 protects nonprimate cells against human complement mediated lysis and suggest that donor pigs transgenic for hCD59 could play a crucial role in clinical xenotrans- plantation. Two of five hCD59 transgenic lines showed strong hCD59 expression in several organs relevant for xenotransplantation and a protective effect against HAR. This indicates that the use of the CMV-promoter can facilitate the selection process for optimized transgene expression.

L4 ANSWER 6 OF 7 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AU Ogura, Atsuo (1); Ogonuki, Narumi; Takano, Kaoru; Inoue, Kimiko
TI Microinsemination, **nuclear transfer**, and cytoplasmic transfer: The application of new reproductive engineering techniques to mouse genetics.
SO Mammalian Genome, (November, 2001) Vol. 12, No. 11, pp. 803-812. print. ISSN: 0938-8990.

L4 ANSWER 7 OF 7 MEDLINE DUPLICATE 2
AU Tao T; Machaty Z; Boquest A C; Day B N; Prather R S
TI Development of pig embryos reconstructed by microinjection of cultured fetal fibroblast cells into in vitro matured oocytes.
SO ANIMAL REPRODUCTION SCIENCE, (1999 Jun 28) 56 (2) 133-41. Journal code: 7807205. ISSN: 0378-4320.
AB **Nuclear transfer** as originally developed for use in amphibians involved microinjecting a nucleus directly into the cytoplasm of the oocyte. A major mammalian modification has been to use cell fusion to introduce the nucleus. Here we report using a microinjection method to introduce small and medium sized fibroblast cells into mature oocytes. Small cells were more likely to result in nuclear formation (30%) than larger cells (15%; P = 0.013). Small, confluent and serum starved cells resulted in nuclear formation more often (P < 0.048) than did cycling cells. The rate of nuclear formation was not dependent upon the media, (NCSU-23 or TL-Hepes without calcium) nor upon the duration of exposure to the media (1 h to 4 h) after microinjection but before activation. While such treatments did not have an effect on nuclear formation, treatment of parthenogenetically activated oocytes with calcium-free TL-Hepes reduced the percentage of blastocysts (P = 0.068. 11.2% vs. 18.3%) and increased the percentage of morula stage embryos (P = 0.007; 27.6% vs. 15.7%) as compared with culture in NCSU. Finally, small confluent cells were used for **nuclear transfer** and resulted in two presumptive blastocyst stage embryos [2/128 injected or 2/38 (5.3%) successful injections]. These results show that presumptive blastocyst stage embryos can result from microinjection of fibroblast cells to enucleated oocytes and thus may provide a method to create **transgenic knockout** animals.

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